Using Logic Models for Project Planning & Measurement

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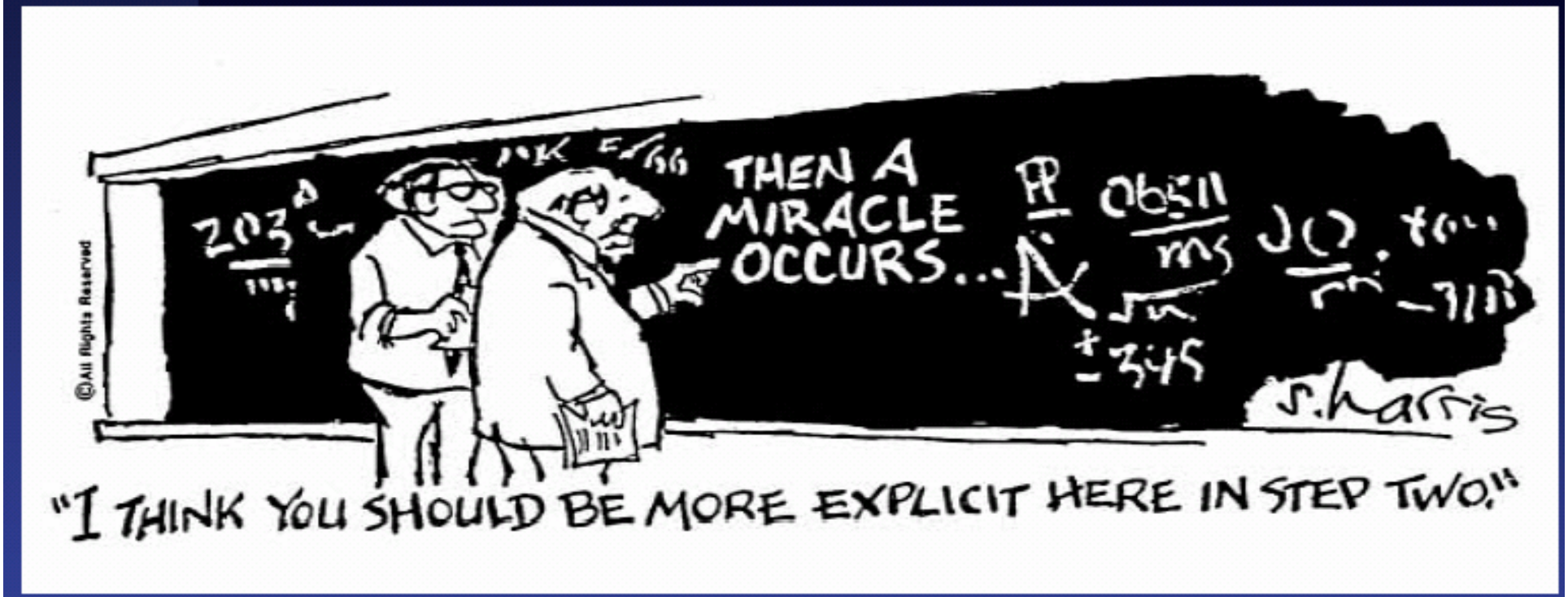
Presented to:

Region 8 Grant Writing Workshop

You Will Learn:

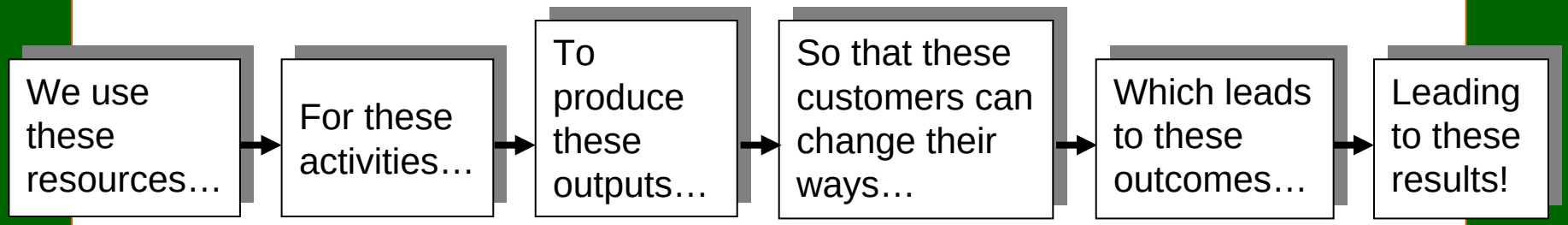
- Benefits of using logic models
- Identifying outputs and outcomes
- How to develop a logic model for your program/project
- Using a Logic Model to develop performance measures

The Logic Model



What is a Logic Model?

A logic model is a tool that helps you make connections between actions and results.



Logic Models as Recipes

A Successful Chef…

Resources	Activities	Outputs	Customers	Outcomes	Results
Ingredients Utensils Cooks	Chop, mix and bake	Dinner	Diners	Satisfied Customers	Profit Regulars

Benefits of Logic Modeling

- Illustrates the logic or theory of the program or project, and informs program design.
- Focuses attention on the most important connections between actions and results.
- Builds a common understanding among staff and with stakeholders.
- Helps manage for results.
- Finds “gaps” in the logic of a program and helps to resolve them.

Elements of the Logic Model

What you are doing → **Why you are doing it**

Outcomes

Resources/ Inputs:	Activities	Outputs	Customer	Short-term	Inter-mediate	Long-term
Programmatic investments available to support the program.	Things you do– activities you plan to conduct in your program.	Products or services that are a direct result of your activities.	User of the products/ services. Target audience the program is designed to reach.	Changes in learning, knowledge, attitude, skills, understanding. **Attitudes** ***Know Better***	Changes in behavior, practice or decisions. **Behavior** ***Do Better***	Change in condition. **Condition** ***The world is a better place***

External Influences

Factors outside of your control (positive or negative) that may influence the outcome and impact of your program/project.

Types of Program Elements

Example	Type of Program Element
1. Collect Electronics Waste	1. Activity
2. Newsletter announcing new collection program	2. Output
3. Waste generators	3. Customer Reached
4. 3 summer interns, 3 full-time staff	4. Resource

Types of Program Elements

Example	Type of Program Element
5. Zero-waste culture is established among industrial waste generators	5. Long term Outcome
6. Knowledge of new collection regime increased	6. Short Term Outcome
7. Waste generators produce less contamination in recyclables.	7. Intermediate Outcome
8. Court case decision affecting municipal recycling operations	8. External Influences

Basic Logic Model Worksheet

RESOURCES	OUTPUTS			OUTCOMES		
RESOURCES What we invest	**ACTIVITIES** What we do	**OUTPUTS** What we produce	**CUSTOMERS** Whom we reach	**SHORT TERM** Change in attitude/ knowledge/skills	**MEDIUM TERM** Change in behavior	**LONG TERM** Change in condition
$75,000 grant 1 FTE	Conduct research on decline of fish pop.	Recom-mendations on how to improve health of and habitat for fish	Local decision makers & stakeholders	Increased knowledge of low fish pops, causes of pollution and habitat destruction, attitude about importance of fish to the ecosystem & community	Change in behaviors that cause damage to fish habitat	Improved water quality and restoration of fish habitat

GOAL: Create conditions for healthy and abundant fish.

External Influences: political influences

Applied Research Grant
on
Pre-Spawning Salmon Mortality in Urban Creeks

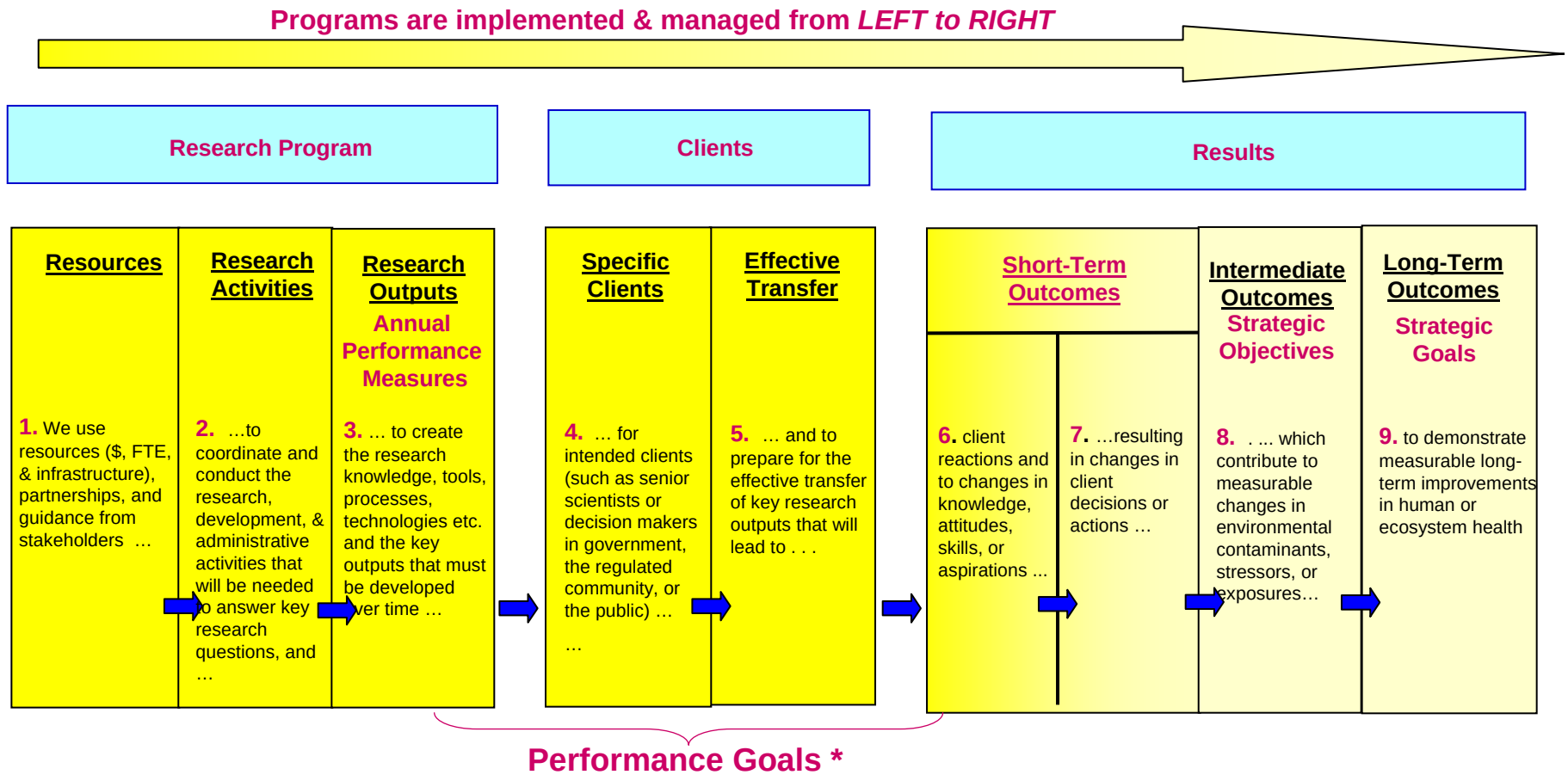
Assumptions (Logic for the Project):

There is relationship between pre-spawning salmon mortality (PSM), watershed characteristics, and land use.
A scientific understanding of the causes can lead to strategies that reduce the mortality rate.
Understanding PSM can lead to policy decisions that will improve watershed health, land use and human health.
Strong partnerships coupled with research, communication and coordination are necessary to reduce pre-spawning salmon mortality.

INPUTS (DESCRIBE	ACTIVITIES (DESCRIBE)	OUTPUTS (DELIVERABLES) (QUANTIFY)	CUSTOMERS /TARGET AUDIENCE /BENEFICIARIES	SHORT TERM OUTCOMES (MEASURABLE)	MEDIUM TERM OUTCOMES (MEASURED IF POSSIBLE)	LONG TERM OUTCOMES (PROJECTED)	EPA STRATEGIC OBJECTIVES SUPPORTED
EPA Grant $$ Staff Time Materials In-kind Contributions Volunteers	Create project partnerships. Field surveys. Develop GIS. Develop poll information request form Survey local governments and DFW. Document PSM observations.	- GIS-based land-use and watershed characteristics analyses performed. (Yes or No & Quality) - Questionnaire mailed and followed with phone call & compile results (# completed, # of communities reached) - Field surveys performed in 7 Bellingham, Seattle, and Olympia watersheds & data entered. (# of streams surveyed. # of stream miles, # of fish examined) -Final report drafted. (Yes or No & Quality) -User friendly presentations developed by WA Trout (Yes or No & Quality) **Scientific/Data Track:** Presentation & Discussion with NOAA Scientists **Policy Track:** -----Presentations to 6 County Councils **Public Awareness Track:** Meet with Environmental groups and reporters.	**Agency Science Track:** Scientists at: USFWS, NMFS, and EPA. WDFW. County & City Planners **Community Track:** **Policy Track:** County & City Officials Environmental Groups Reporters **Public Awareness Track:** Citizens living by selected watersheds. Environmental Groups Reporters Developers, tribes and industries likely to impact selected streams.	**Agency Science Track:** NOAA Scientists are informed about study. (Scientists confirm value of study through letters of appreciation, references to study in other publications and presentations.) **Community Track:** **Policy Track:** Politicians are aware of the problem & scope of the crisis. (# of public forums & meetings with PSM on agenda. # of unsolicited inquiries from public officials .) **Public Awareness Track:** Public is aware of the problem & scope of the crisis. Media coverage. (Copies of newsletters & articles referencing the results of the study, including copies of same.) **ALL:** Study results and database available to everyone. (# of copies of report distributed to each target. # of public presentations. # of WEB hits on Database. # of unsolicited inquiries.)	**Agency Science Track:** NOAA Scientists use study results to explain mechanism for mortality and identify appropriate solutions. **Community Track:** **Policy Track:** Politicians pass land use regulations to lessen PSM. **Public Awareness Track:** Public is informed of behaviors that contribute to PSM & alternative practices. Public supports policy makers who are trying to solve the problem. **ALL:** Study results and database available to everyone. (# of copies of report distributed. # of presentations. # of WEB hits on Database.) NEXT GRANT???	**Agency Science Track:** Remediation techniques are evaluated in relationship to baseline data to validate and improve best management practices. Trends in PSM can document improvements over time. **Community Track:** **Policy Track:** Effective remediation techniques are adopted throughout the watersheds. Improved land use patterns. **Public Awareness Track:** Public supports policies & behavior changes become widespread **ALL:** Reduced PSM and Improved water quality. GIS information available for other uses and applications. NEXT GRANT???	**Agency Science Track:** **Goal 2 Clean Water** Objective 2.2.1 Improve Water Quality on a Watershed Basis. **Community Track:** **Goal 4 Healthy Communities and Ecosystems**, Objective 4.2.1 Sustain Community Health

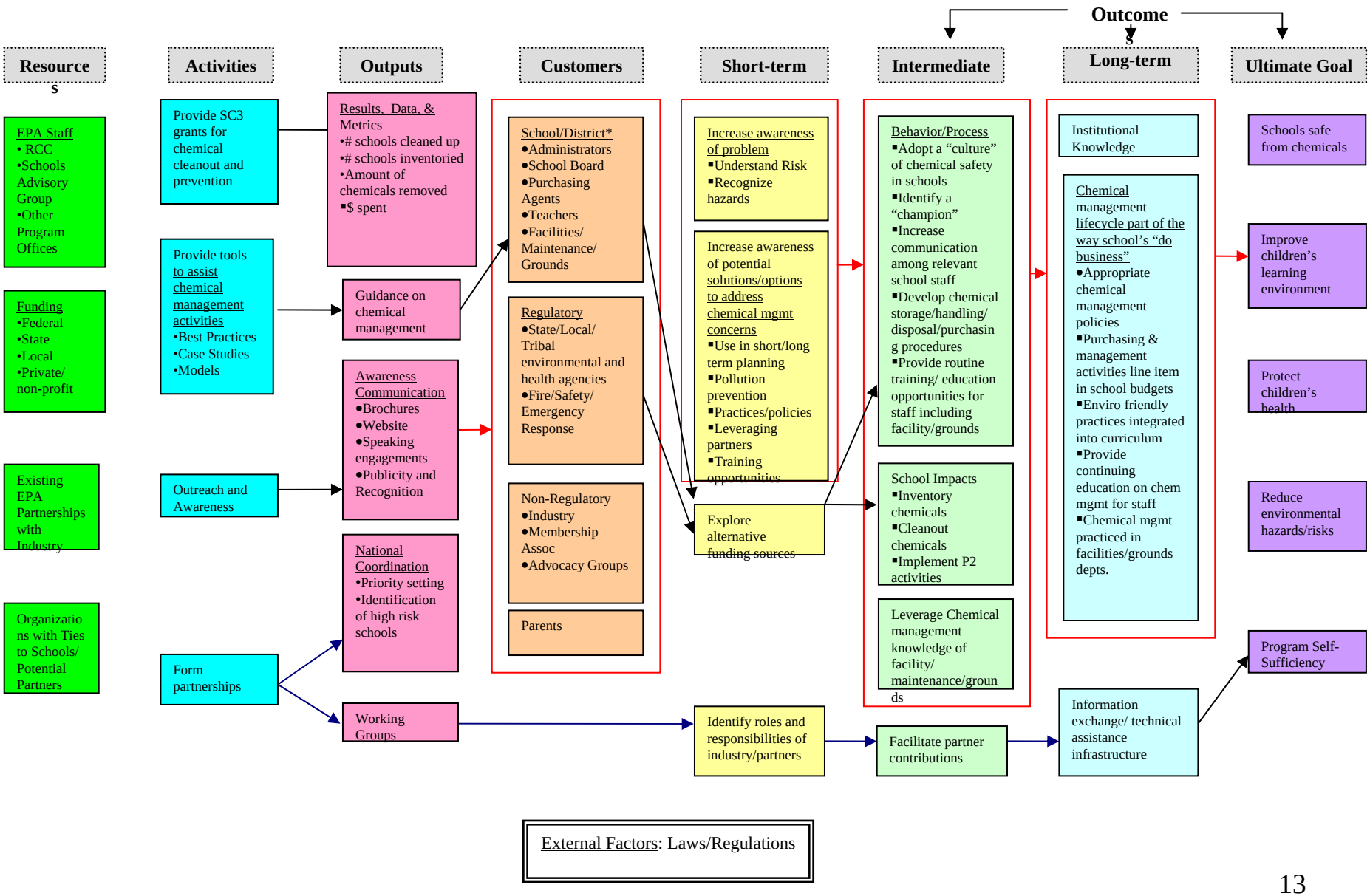
Thick Line = Limit of Direct Grant Accountability

ORD Is Developing Outcome-Oriented Performance Indicators



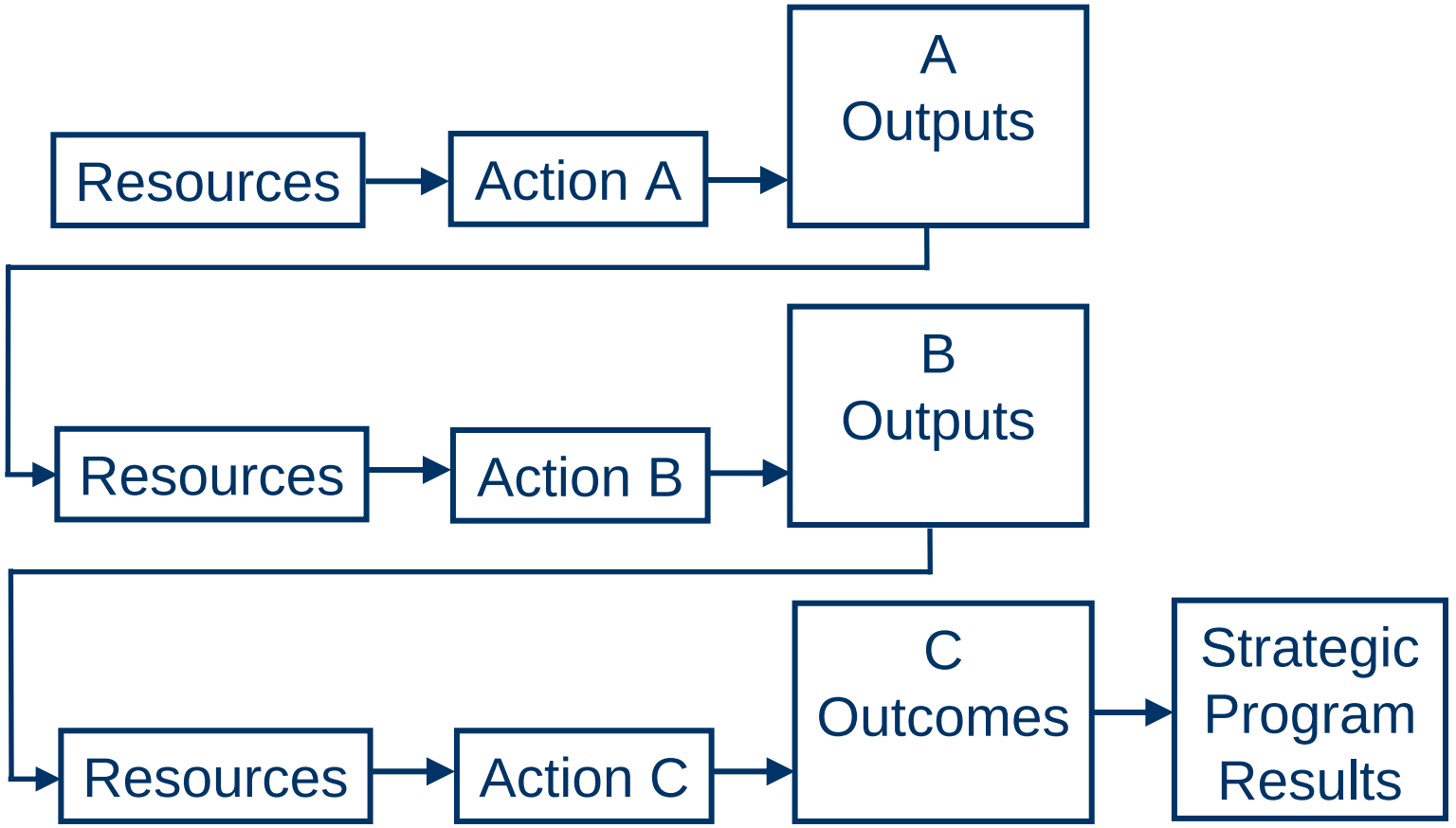
*Please note that Performance Goals include key research outputs, a synthesis product, & plans for effective transfer to intended clients to bring about short-term outcomes. The synthesis product addresses and serves to answer a key research question linked to outcomes, and compares the accomplishment represented by the Performance Goal to baseline conditions and to related goals in future years needed to achieve outcomes.

Exhibit 2: EPA Office of Solid Waste: Schools Chemical Cleanout Campaign Logic Model(SC3)

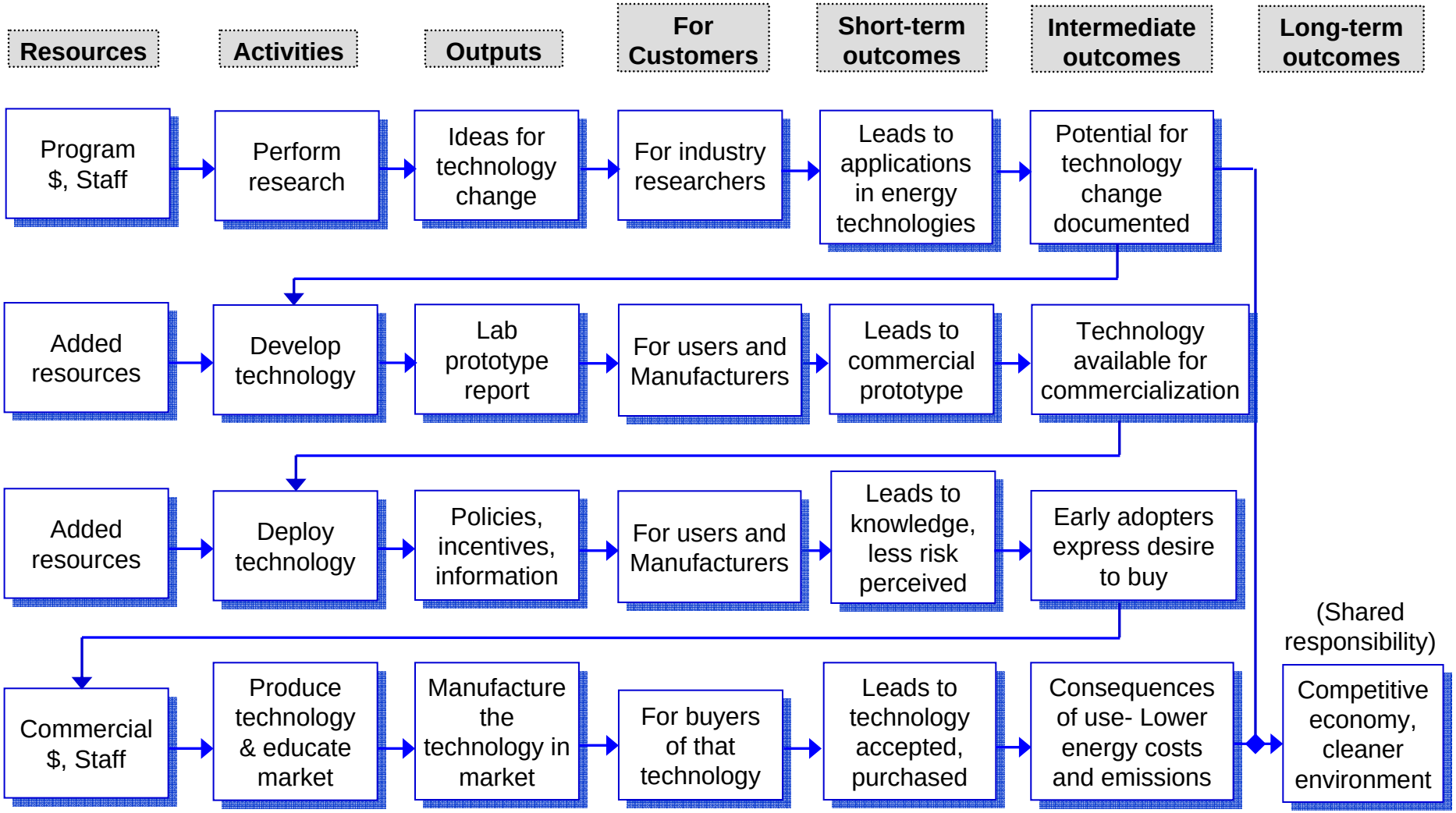


*Keeping in mind potential geographic (urban vs. rural) and socio-economic considerations

“Z” Logic


Resources
Action A
A
Outputs
Resources
Action B
B
Outputs
Resources
Action C
C
Outcomes
Strategic
Program
Results

Energy R,D,&D Program Using 'Z' Logic



External Influences: Price of oil and electricity, economic growth in industry and in general, perception of risk of global climate change and need for national energy security, market and technology assumptions.

Source: McLaughlin and Jordan, 1999

Logic Modeling Exercise 1

Brief application of logic modeling

Region 2 Resource Conservation Challenge Construction Beneficial Use – Priority Area: Demolition (C&D) Logic Model

Goal: Collaborate with partners to reduce, reuse and recycle C&D debris and increase the amount of C&D materials that are beneficially used in an environmentally sound manner.

Region 2 Resource Conservation Challenge Construction Beneficial Use – Priority Area: Demolition (C&D) Logic Model

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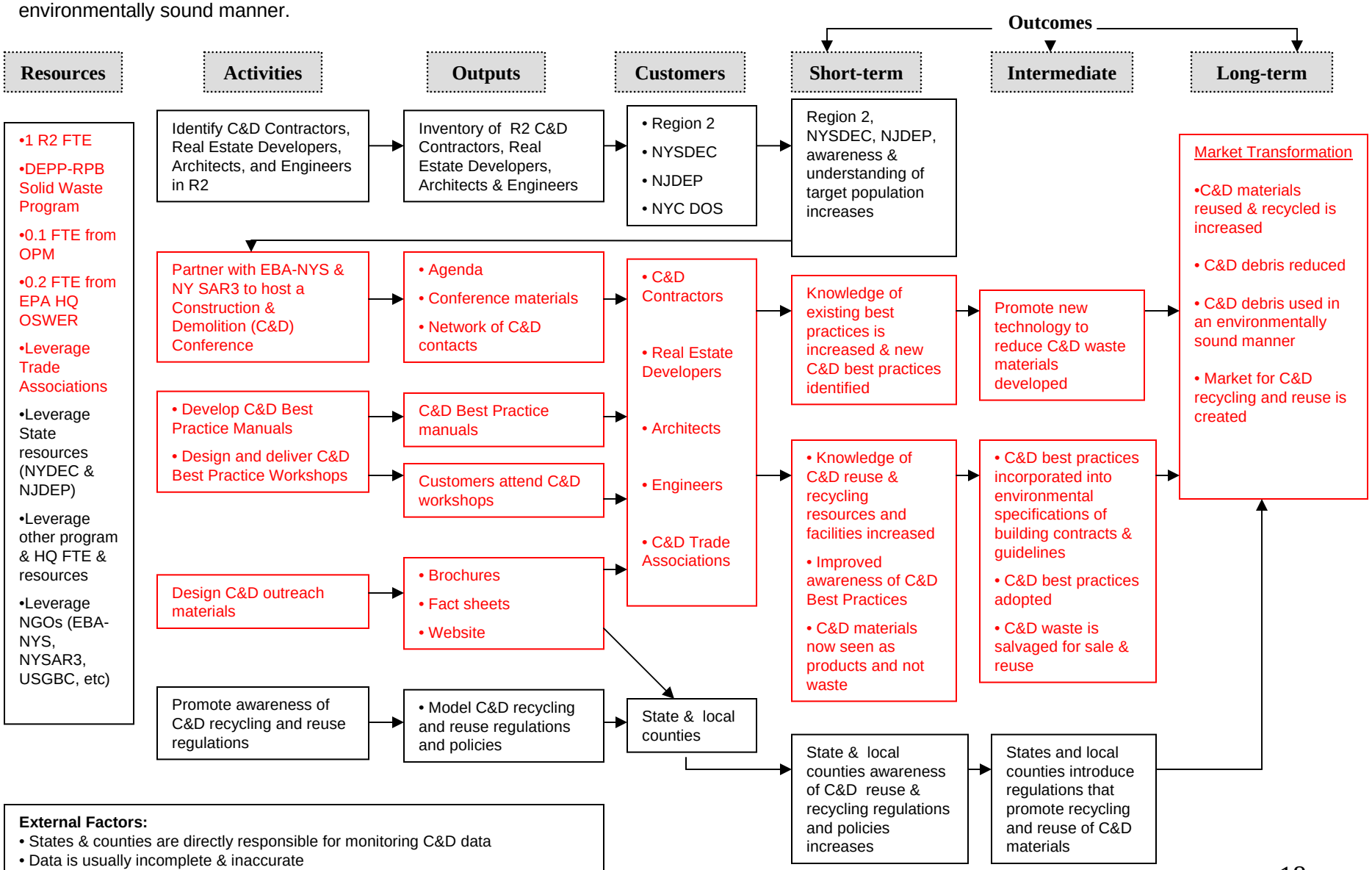

External Factors:
- States & counties are directly responsible for monitoring C&D data
- Data is usually incomplete & inaccurate
- States & counties have introduced policies to promote a recycling environment
- It is more cost efficient to recycle some C&D materials
- Several organizations support C&D reuse & recycling

Assumptions: Few contractors, architects, and real estate developers know about best practices & economic incentives for the reuse & recycling of C&D debris.

Project Measurement

- Measures assess the effect of your project or program.
- Ongoing monitoring and reporting of accomplishments
- Examines the achievement of program objectives.
- Describes program achievements in terms of outputs, outcomes, in a given time against a pre-established goal.
- Early warning to management.

Output and Outcome Measures

Output – people trained

Short-term outcome – increased knowledge

Intermediate outcome – you use logic model

Long-term outcome – improved proposals

Developing Measurements

RESOURCES →	OUTPUTS →			OUTCOMES →		
RESOURCES What we invest	**ACTIVITIES** What we do	**OUTPUTS** What we produce	**CUSTOMERS** Whom we reach	**SHORT TERM** Change in attitude/ knowledge/skills	**MEDIUM TERM** Change in behavior	**LONG TERM** Change in condition
$75,000 grant 1 FTE	Conduct research on decline of fish pop. Measures: #of sampling sites, data from interviews	Recom-mendations on how to improve health of and habitat for fish Measure: Report completed on time	Local decision makers & stakeholders Measure: Reached all targeted audiences	Increased knowledge of low fish pops, causes of pollution and habitat destruction, attitude about importance of fish to the ecosystem & community Measure: Increased support to fix problems	Change in behaviors that cause damage to fish habitat Measure: Reduced pollution to river	Conditions in the stream improve Measure: Water quality improves, fish populations increase

GOAL: Fish are healthy and abundant.

External Influences: political influences

Resources for Logic Models

Region 8 Logic Model Website:

- http://www.epa.gov/region8/community_resources/grants/enviroresults.html

The University of Wisconsin-Extension

- www.uwex.edu/ces/lmcourse/#

WK Kellogg Foundation Logic Model Development Guide

- www.wkkf.org/Pubs/Tools/Evaluation/Pub3669.pdf

“The Logic Model for Program Planning and Evaluation”

- www.uidaho.edu/extension/LogicModel.pdf

The Logic Model Game

- www.cleggassociates.com/Resources/LogicModel/game.asp?version=environmental

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